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Indian Standard

REDUCER COUPLING ASSEMBLIES FOR OIL HYDRAULIC SYSTEM — SPECIFICATION

UDC 621·643·415 : 621·22

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

May 1992 Price Group 2

Fluid Power Fittings, Hoses and Hose Assemblies Sectional Committee, PE 17

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by Fluid Power Fittings, Hoses and Hose Assemblies Sectional Committee had been approved by Production Engineering Division Council.

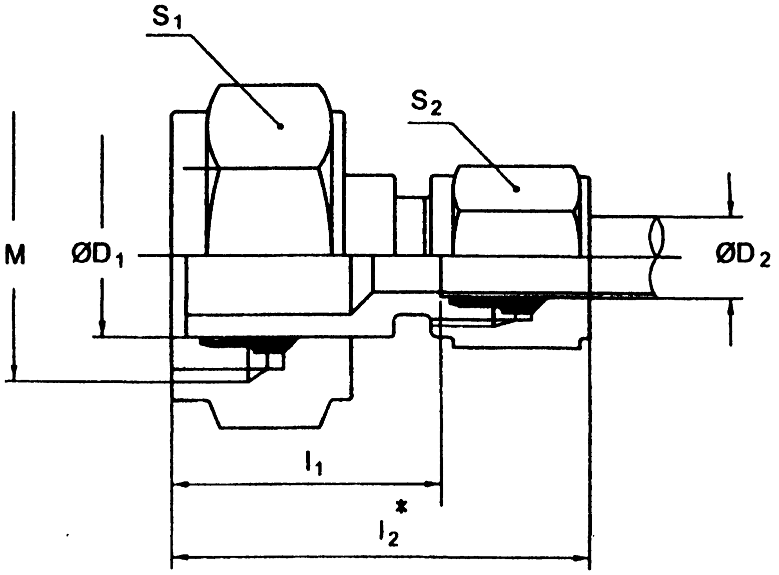
In the preparation of this standard, considerable assistance has been derived from BS 4368 (Part 1) 'Carbon and Stainless Steel Compression Coupling for Tubes Heavy Series, and BS 4368 (Part 3) 'Carbon and Stainless Steel Compression Coupling Light Series', issued by British Standards Institute (BSI).

AMENDMENT NO. 1 SEPTEMBER 2005
TO
IS 13336 : 1992 REDUCER COUPLING ASSEMBLIES FOR OIL HYDRAULIC SYSTEM — SPECIFICATION

(*Table* 1, *pages* 2 *to* 4) — Substitute the following for the existing table:

Table 1 Dimensions for Reducer Assemblies
(*Clause* **3**)

All dimensions in millimetres.



*Dimensions given are approx. with tightened nut.

Light Series, L

$\varnothing D_1$	$\varnothing D_2$	S_1	S_2	l_1	l_2	M
8	6	17	14	23.5	38	M 14 × 1.5
10	6	19	14	23.5	38	M 16 × 1.5
10	8	19	17	23.5	38	M16 × 1.5
12	6	22	14	23.5	38	M 18 × 1.5
12	8	22	17	23.5	38	M 18 × 1.5
12	10	22	19	24.5	39	M 18 × 1.5
15	6	27	14	23.5	38	M 22 × 1.5
15	8	27	17	23.5	38	M 22 × 1.5
15	10	27	19	24.5	39	M 22 × 1.5
15	12	27	22	24.5	39	M 22 × 1.5
18	6	32	14	24.5	39	M 26 × 1.5
18	8	32	17	24.5	39	M 26 × 1.5
18	10	32	19	25.5	40	M 26 × 1.5
18	12	32	22	25.5	40	M 26 × 1.5
18	15	32	27	26.5	42	M 26 × 1.5
22	6	36	14	25.5	40	M 30 × 2.0
22	8	36	17	25.5	40	M 30 × 2.0
22	10	36	19	26.5	41	M 30 × 2.0
22	12	36	22	26.5	41	M 30 × 2.0
22	15	36	27	27.5	43	M 30 × 2.0
22	18	36	32	27	43	M 30 × 2.0

Price Group 1

Table 1 (*Continued*)

Light Series, L

$\varnothing D_1$	$\varnothing D_2$	S_1	S_2	l_1	l_2	M
28	6	41	14	26.5	41	M 36 × 2.0
28	8	41	17	26.5	41	M 36 × 2.0
28	10	41	19	27.5	42	M 36 × 2.0
28	12	41	22	27.5	42	M 36 × 2.0
28	15	41	27	28.5	44	M 36 × 2.0
28	18	41	32	28	44	M 36 × 2.0
28	22	41	36	30	46	M 36 × 2.0
35	6	50	14	31.5	46	M 45 × 2.0
35	8	50	17	31.5	46	M 45 × 2.0
35	10	50	19	32.5	47	M 45 × 2.0
35	12	50	22	32.5	47	M 45 × 2.0
35	15	50	27	33.5	49	M 45 × 2.0
35	18	50	32	33	49	M 45 × 2.0
35	22	50	36	35	51	M 45 × 2.0
35	28	50	41	35	52	M 45 × 2.0
42	10	60	19	33.5	48	M 52 × 2.0
42	12	60	22	33.5	48	M 52 × 2.0
42	15	60	27	34.5	50	M 52 × 2.0
42	18	60	32	34	50	M 52 × 2.0
42	22	60	36	36	52	M 52 × 2.0
42	28	60	41	36	53	M 52 × 2.0
42	35	60	50	35	57	M 52 × 2.0

Heavy Series, H

$\varnothing D_1$	$\varnothing D_2$	S_1	S_2	l_1	l_2	M
8	6	19	17	25	40	M 16 × 1.5
10	6	22	17	26	41	M 18 × 1.5
10	8	22	19	26	41	M 18 × 1.5
12	6	24	17	27	42	M 20 × 1.5
12	8	24	19	27	42	M 20 × 1.5
12	10	24	22	26.5	43	M 20 × 1.5
14	6	27	17	29	44	M 22 × 1.5
14	8	27	19	29	44	M 22 × 1.5
14	10	27	22	28.5	45	M 22 × 1.5
14	12	27	24	28.5	45	M 22 × 1.5
16	6	30	17	29	44	M 24 × 1.5
16	8	30	19	29	44	M 24 × 1.5
16	10	30	22	28.5	45	M 24 × 1.5
16	12	30	24	28.5	45	M 24 × 1.5
16	14	30	27	30	48	M 24 × 1.5
20	6	36	17	34	49	M 30 × 2.0
20	8	36	19	34	49	M 30 × 2.0
20	10	36	22	33.5	50	M 30 × 2.0
20	12	36	24	33.5	50	M 30 × 2.0
20	14	36	27	35	53	M 30 × 2.0
20	16	36	30	34.5	53	M 30 × 2.0

Table 1 (*Concluded*)

Light Series, H

$\varnothing D_1$	$\varnothing D_2$	S_1	S_2	l_1	l_2	M
25	6	46	17	37	52	M 36 × 2.0
25	8	46	19	37	52	M 36 × 2.0
25	10	46	22	36.5	53	M 36 × 2.0
25	12	46	24	36.5	53	M 36 × 2.0
25	14	46	27	37	55	M 36 × 2.0
25	16	46	30	36.5	55	M 36 × 2.0
25	20	46	36	37.5	59	M 36 × 2.0
30	6	50	17	39	54	M 42 × 2.0
30	8	50	19	39	54	M 42 × 2.0
30	10	50	22	38.5	55	M 42 × 2.0
30	12	50	24	38.5	55	M 42 × 2.0
30	14	50	27	40	58	M 42 × 2.0
30	16	50	30	39.5	58	M 42 × 2.0
30	20	50	36	39.5	61	M 42 × 2.0
30	25	50	46	40	64	M 42 × 2.0
38	6	60	17	43	58	M 52 × 2.0
38	8	60	19	43	58	M 52 × 2.0
38	10	60	22	42.5	59	M 52 × 2.0
38	12	60	24	42.5	59	M 52 × 2.0
38	14	60	27	44	62	M 52 × 2.0
38	16	60	30	43.5	62	M 52 × 2.0
38	20	60	36	43.5	65	M 52 × 2.0
38	25	60	46	44	68	M 52 × 2.0
38	30	60	50	44.5	71	M 52 × 2.0

Reprography Unit, BIS, New Delhi, India

Indian Standard

REDUCER COUPLING ASSEMBLIES FOR OIL HYDRAULIC SYSTEM — SPECIFICATION

1 SCOPE

This standard covers the dimensions and other requirements for reducer coupling assemblies used in oil hydraulic systems.

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

IS No.	*Title*
2500 (Part 1) : 1973	Sampling inspection tables : Part 1 Inspection by attributes and by count of defects (*first revision*)
8802 : 1987	Ferrules for oil hydraulic couplings (*first revision*)
8803 : 1987	Coupling nuts for oil hydraulic couplings (*first revision*)
8805 (Part 1) : 1978	General requirement for ferrule type of couplings used in oil hydraulic system : Part 1 General
13337 : 1992	Straight reducer coupling body for oil hydraulic systems — Specification

3 DIMENSIONS

Dimensions shall be as given in Table 1.

4 ASSEMBLY DETAILS

A reducer coupling assembly consists of ferrules as per IS 8802 : 1987, nut as per IS 8803 : 1987 and reducer coupling body as per IS 13337 : 1992.

5 GENERAL REQUIREMENTS

For details not covered in this standard reference shall be made to IS 8805 (Part 1) : 1978.

6 DESIGNATION

A reducer coupling assembly light series for outside diameter of reducer coupling 8 mm and outside diameter of tube 6 mm conforming to this standard shall be designated as:

Reducer Coupling IS 13336 L 8 × 6.

7 PACKAGING

Reducer coupling assemblies shall be suitably packed so that no damage takes place while transporting and storing. The mode of packaging shall be as agreed to by the purchaser and the supplier.

8 SAMPLING

8.1 Lot

In a consignment of all reducer coupling assemblies of the same size manufactured from the same material shall be grouped together to constitute a lot.

8.2 Unless otherwise agreed to between the supplier and the purchaser, the procedure given in IS 2500 (Part 1) : 1973 shall be followed for sampling inspection. The inspection level, acceptable quality level (AQL) and type of sampling plan to be followed for various characteristics shall be given in **8.2.1**.

8.2.1 For dimensions, general requirements and designation, a single sampling plan with inspection level IV and AQL of 2·5% as given in Tables 1 and 2 of IS 2500 (Part 1) : 1973 shall be followed.

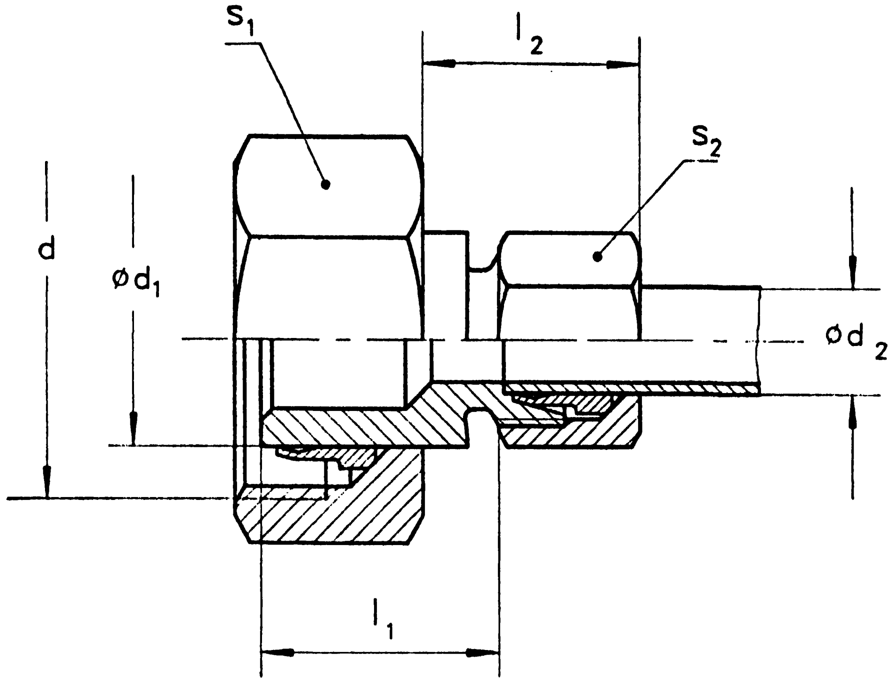
9 MARKING

Each reducer coupling assembly shall be marked with designation and source of manufacturer.

Table 1 Dimensions for Reducer Assemblies

(*Clause* 3)

All dimensions in millimetres.



Series	d_1	d_2	d	l_2 ≈	l_1 ≈	s_1*	s_2*
L	8	6	M14 × 1·5	24	23·5	17	14
	10	6	M16 × 1·5	24	23·5	19	14
	10	8	M16 × 1·5	24	23·5	19	17
	12	6	M18 × 1·5	24	23·5	22	14
	12	8	M18 × 1·5	24	23·5	22	17
	12	10	M18 × 1·5	25	24·5	22	19
	15	6	M22 × 1·5	23	23·5	27	14
	15	8	M22 × 1·5	23	23·5	27	17
	15	10	M22 × 1·5	24	24·5	27	19
	15	12	M22 × 1·5	24	24·5	27	22
	18	6	M26 × 1·5	23	24·5	32	14
	18	8	M26 × 1·5	23	24·5	32	17
	18	10	M26 × 1·5	24	25·5	32	19
	18	12	M26 × 1·5	24	25·5	32	22
	18	15	M26 × 1·5	26	26·5	32	27
	22	6	M30 × 2	24	25·5	36	14
	22	8	M30 × 2	24	25·5	36	17
	22	10	M30 × 2	25	26·5	36	19
	22	12	M30 × 2	25	26·5	36	22
	22	15	M30 × 2	27	27·5	36	27
	22	18	M30 × 2	27	27	36	32
	28	6	M36 × 2	25	26·5	41	14
	28	8	M36 × 2	25	26·5	41	17
	28	10	M36 × 2	26	27·5	41	19

***Tolerance on s_1 and s_2 —**
h14 for s_1 and s_2 less than 19 mm,
h15 for s_1 and s_2 for greater than or equal to 19 mm.

Table 1 (*continued*)

All dimensions in millimetres.

Series	d_1	d_2	d	l_2 ≈	l_1 ≈	s_1*	s_2*
L	28	12	M36 × 2	26	27·5	41	22
	28	15	M36 × 2	27	28·5	41	27
	28	18	M36 × 2	28	28	41	32
	28	22	M36 × 2	30	30	41	36
	35	6	M45 × 2	25	31·5	50	14
	35	8	M45 × 2	25	31·5	50	17
	35	10	M45 × 2	26	32·5	50	19
	35	12	M45 × 2	26	32·5	50	22
	35	15	M45 × 2	27	33·5	50	27
	35	18	M45 × 2	28	33	50	32
	35	22	M45 × 2	30	35	50	36
	35	28	M45 × 2	30	35	50	41
	42	6	M52 × 2	25	32·5	60	14
	42	8	M52 × 2	25	32·5	60	17
	42	10	M52 × 2	26	33·5	60	19
	42	12	M52 × 2	26	33·5	60	22
	42	15	M52 × 2	27	34.5	60	27
	42	18	M52 × 2	28	34	60	32
	42	22	M52 × 2	30	36	60	36
	42	28	M52 × 2	30	36	60	41
	42	35	M52 × 2	34	35	60	50
H	8	6	M16 × 1·5	25	25	19	17
	10	6	M18 × 1·6	25	26	22	17
	10	8	M18 × 1·5	25	26	22	19
	12	6	M20 × 1·5	26	27	24	17
	12	8	M20 × 1·5	26	27	24	19
	12	10	M20 × 1·5	27	26·5	24	22
	14	6	M22 × 1·5	26	29	27	17
	14	8	M22 × 1·5	26	29	27	19
	14	10	M22 × 1·5	27	28·5	27	22
	14	12	M22 × 1·5	27	28·5	27	24
	16	6	M24 × 1·5	26	29	30	17
	16	8	M24 × 1·5	26	29	30	19
	16	10	M24 × 1·5	27	28·5	30	22
	16	12	M24 × 1·5	27	28·5	30	24
	16	14	M24 × 1·5	30	30	30	27
	20	6	M30 × 2	27	34	36	17
	20	8	M30 × 2	27	34	36	19
	20	10	M30 × 2	28	33·5	36	22
	20	12	M30 × 2	28	33·5	36	24
	20	14	M30 × 2	31	35	36	27
	20	16	M30 × 2	31	34·5	36	30
	25	6	M36 × 2	28	37	46	17
	25	8	M36 × 2	28	37	46	19
	25	10	M36 × 2	29	36·5	46	22
	25	12	M36 × 2	29	36·5	46	24

*Tolerance on s_1 and s_2 —
h14 for s_1 and s_2 less than 19 mm,
h15 for s_1 and s_2 for greater than or equal to 19 mm.

Table 1 (*concluded*)

All dimension in millimetres.

Series	d_1	d_2	d	l_2 ≈	l_1 ≈	s_1*	s_2*
H	25	14	M36 × 2	31	37	46	27
	25	16	M36 × 2	31	36·5	46	30
	25	20	M36 × 2	35	37·5	46	36
	30	6	M42 × 2	27	39	50	17
	30	8	M42 × 2	27	39	50	19
	30	10	M42 × 2	28	38·5	50	22
	30	12	M42 × 2	28	38·5	50	24
	30	14	M42 × 2	31	40	50	27
	30	16	M42 × 2	31	39·5	50	30
	30	20	M42 × 2	35	39·5	50	36
	30	25	M42 × 2	38	40	50	46
	38	6	M52 × 2	27	43	60	17
	38	8	M52 × 2	27	43	60	19
	38	10	M52 × 2	28	42·5	60	22
	38	12	M52 × 2	28	42·5	60	24
	38	14	M52 × 2	31	44	60	27
	38	16	M52 × 2	31	43·5	60	30
	38	20	M52 × 2	35	43·5	60	36
	38	25	M52 × 2	38	44	60	46
	38	30	M52 × 2	41	44.5	60	50

NOTE — All dimensions of l_1 and l_2 are approximate in tightened condition.

*Tolerance on s_1 and s_2 —
h14 for s_1 and s_2 less than 19 mm,
h15 for s_1 and s_2 for greater than or equal to 19 mm.

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